

A COMPARISON OF THE EARLY SPRING EMERGENCE OF THE MACRO-MOTHS 1989-1991 TAKEN AT FRESHWATER, ISLE OF WIGHT AT MERCURY VAPOUR LIGHT

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The winters of 1989 and 1990 were two of the mildest in living memory leading to very forward springs producing a number of interesting early emergences of some of our macro-moths. By comparison, 1991 was an 'average' year and illustrates well the out of season emergence of the two previous years. The months studied were from the beginning of January to the end of March, and over the three years 38 species were recorded in a private garden in the middle of the village of Freshwater.

The Winter of 1988-89 was exceptionally mild, the November of 1988 being the sunniest on record with 115.5 hours; almost double the 70-year-old average for that month. December was mild and dry but with only 51.0 hours of sunshine. I had a Christmas card from the late E. C. Pelham-Clinton stating that he had taken *Orthosia stabilis* (D. & S.) at light on 13.xii.88 and this was the last entry in his diary. The first three months of 1989 were all exceptionally mild. Southerly winds blew during early January and at the end of March which resulted in a few of the commoner migrants being caught.

The Winter of 1990 was even milder but much wetter than that of 1989. January will be remembered for its severe gales and on 25 January storm-force south-westerlies were the most notable since the hurricane of 16 October 1987. There were also severe gales during February, the wettest since 1951 with 6.89 inches of rain. December 1989, January and February 1990 were the wettest months on record with a total rainfall of 18.32 inches compared to the winter average of 9.07 inches. This beat the previous record of 15.92 inches in 1924-25. March was the driest since 1961 with 162.6 hours of sunshine, well above the average of 129.5 hours and no air frost was recorded. There was considerable migrant activity during the end of February and in March along the South Coast when a number of the rarer migrants were recorded. This mild spring was followed by a prolonged hot summer, the warmest year since 1659.

The winter of 1990-91 was 'average' with a cold period and snow in December and early February although February recorded the lowest temperatures for four years. The later half of January was dry but overcast although Manchester recorded its sunniest January ever. March was a mild and wet month with south-easterly winds but unlike 1990 there was no migration. The later half of March was much drier and quite sunny but with frosts at night. Many of the nights' total number of moths averaged over 30 during this month with a maximum of 11 species being recorded during one night for each of the three years at the end of March.

Amongst the moths which emerge in the spring I took *Orthosia stabilis* (D. & S.) as early as 15.ii in 1989. It was a week later in 1990 and nearly four weeks later in 1991. There was only a day's difference with the emergence of *Xylocampa areola* (Esp.) which was out on 21.ii in 1990 and 22.ii in 1989 but this compares with 12.iii in 1991. *Orthosia gothica* (L.) did not emerge until 12.iii in 1991 and 16.iii in 1989, compared to 21.ii in 1990. This seems to show that it was not affected by the mild winter in 1989. *Orthosia cruda* (D. & S.) hatched in March and this species does not seem to have been affected by the mild weather as it was recorded earliest in 1991 on 13.iii compared to 16.iii in 1989 and 28.iii in 1990. There was only a day separating the emergence of *Orthosia incerta* (Hufn.) during the three years, it always being taken at the end of March. There does not seem to be a general temperature factor

affecting the orthosias and their emergence was not consistent with the mild weather.

Selenia dentaria (F.) showed a marked variation in emergence over the three years with the earliest date of 25.ii in 1990 compared to 16.iii in 1989 and as late as 1.iv in 1991. *Biston strataria* (Hufn.) was three weeks later in 1991 compared to the earlier two years. *Phlogophora meticulosa* (L.) was taken as early as 11.i. in 1990 compared to the end of March in 1989 and 1991.

Brief mention should be made of the rarer moths that were recorded over this period. There is only one previous record of *Apocheima hispidaria* (D. & S.) for the Isle of Wight (Goater, 1974) being taken by Lobb at Cranmore in 1964 and I took two of this species in 1991 during the end of February and early March. There were two hibernating moths that I had not recorded since the early 1960s and these were *Lithophane socia* (Hufn.) on 30.iii.90 and four *Conistra rubiginea* (D. & S.) in 1991. It is also worth mentioning that the latest dates for *Conistra vaccinii* (L.) and *Conistra ligula* (Esp.) were 14.v and 15.iii respectively.

The warm southerly winds that were a feature of the winters of 1989 and 1990 caused a migration at the end of March 1989 when *Autographa gamma* (L.) and *Agrotis segetum* (D. & S.) were taken, and at the end of February and during the whole of March 1990, when some of the rarer migrants were recorded along the South Coast. These included *Mythimna loreyi* (Dup.) which I took on 9.iii.90, the earliest known record for this country with June being the previous earliest month. There were also numerous early sightings of *Macroglossum stellatarum* (L.) in the south and my brother Mr J. W. Knill-Jones saw one feeding on hyacinth on 22.iii.90. In 1989 the mild January produced records of *Peridroma saucia* (Hübner) on 1.i.89 and *Agrotis ipsilon* (Hufn.) on 10.i.89. I have now recorded the latter species in every month of the year. I had the moth trap out only once during January 1991 when I took the pyralid *Udea ferrugalis* (Hübner) on the 21.i.91. I also took this species on 13.iv.90.

In order to make a comprehensive comparison of these years a brief mention of the early spring butterflies should be made. *Pararge aegeria* (L.) was seen as early as 18.iii.90 and 28.iii.89 and much later on 15.iv.91. *Pieris rapae* (L.) was three weeks later in 1991 and *Celastrina argiolus* (L.) was over two weeks later. Table 1 shows the 38 species of macro-moth taken for the years 1989–91 in chronological order.

There were two exceptionally out-of-season species which I took on 31.iii.90: *Opisthograptis luteolata* (L.) and *Pheosia gnoma* (F.) which do not usually emerge until May.

To conclude, it would seem that the plant life was even more affected than entomology during these years as the daffodils were out in last week of January and the trees were in bud by the end of March in 1989 and 1990 whereas they were a month later in 1991. The butterflies were later by up to four weeks compared to an average of two to three weeks for the moths in 1991 which was a little less advanced than the plant life.

ACKNOWLEDGEMENT

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REFERENCE

Goater, B. 1974. *The butterflies and moths of Hampshire and the Isle of Wight*. Classey.

Table 1. The 38 species of macro-moth taken for the years 1989–91 in chronological order. The earliest date is given for each species in each year. A dash indicates that the moth was not recorded during the period 1 January to 31 March.

Species	1989	1990	1991
<i>Peridroma saucia</i> (Hüb.)	1.i	—	—
<i>Operophtera brumata</i> (L.)	1.i	11.i	—
<i>Erannis defoliaria</i> (Cl.)	—	9.i	—
<i>Conistra ligula</i> (Esp.)	10.i	10.i	15.i
<i>Agrotis ipsilon</i> (Hufn.)	10.i	24.ii	—
<i>Phlogophora meticulosa</i> (L.)	29.iii	11.i	13.iii
<i>Conistra vaccinii</i> (L.)	26.iii	16.i	27.ii
<i>Orthosia stabilis</i> (D. & S.)	15.ii	21.ii	11.iii
<i>Biston strataria</i> (Hufn.)	21.ii	23.ii	13.iii
<i>Xylocampa areola</i> (Esp.)	22.ii	21.ii	12.iii
<i>Orthosia gothica</i> (L.)	16.iii	21.ii	12.iii
<i>Selenia dentaria</i> (F.)	16.iii	25.ii	1.iv
<i>Apocheima pilosaria</i> (D. & S.)	—	—	26.ii
<i>Alsophila aescularia</i> (D. & S.)	31.iii	5.iii	7.iii
<i>Apocheima hispidaria</i> (D. & S.)	—	—	6.iii
<i>Agriopis leucophaeria</i> (D. & S.)	—	—	6.iii
<i>Gymnoscelis rufifasciata</i> (Haw.)	29.iii	6.iii	31.iii
<i>Theria primaria</i> (Haw.)	7.iii	—	11.iii
<i>Agriopis marginaria</i> (F.)	—	8.iii	14.iii
<i>Mythimna loreyi</i> (Dup.)	—	9.iii	—
<i>Eupsilia transversa</i> (Hufn.)	—	—	10.iii
<i>Orthosia cruda</i> (D. & S.)	16.iii	28.iii	13.iii
<i>Conistra rubiginea</i> (D. & S.)	—	—	17.iii
<i>Eupithecia abbreviata</i> (Steph.)	—	17.iii	13.iv
<i>Macroglossus stellatarum</i> (L.)	—	22.iii	—
<i>Orthosia incerta</i> (Hufn.)	28.iii	28.iii	27.iii
<i>Orthosia munda</i> (D. & S.)	—	—	28.iii
<i>Colostygia multistrigaria</i> (Haw.)	28.iii	—	1.iv
<i>Pachynemima hippocastanaria</i> (Hüb.)	—	28.iii	—
<i>Anticlea badiata</i> (D. & S.)	29.iii	31.iii	13.iv
<i>Autographa gamma</i> (L.)	29.iii	—	—
<i>Agrotis segetum</i> (D. & S.)	29.iii	—	—
<i>Scoliopteryx libatrix</i> (L.)	—	30.iii	—
<i>Dasypolia templi</i> (Thunb.)	—	—	30.iii
<i>Anticlea derivata</i> (D. & S.)	30.iii	—	—
<i>Lithophane socia</i> (Hufn.)	—	30.iii	—
<i>Pheosia gnoma</i> (F.)	—	31.iii	—
<i>Opisthograptis luteolata</i> (L.)	—	31.iii	—
No. of species for the 3 months	21	25	24

SHORT COMMUNICATIONS

A relict old forest beetle fauna from Powis Castle Park, Montgomeryshire.—A morning spent in the old deer park of Powis Castle (SJ216064), 9.vi.1990, revealed a rich variety of beetles and other insects within dead and decaying timber. Beetles of particular note are *Melasis buprestoides* (L.) which appears to be new to Wales (Mendel, 1988), and *Dorcatoma chrysomelina* Sturm which appears to be the second record for Wales (the first reported in Alexander, 1988). Pieces of *Melasis* were found